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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,767	11/26/2003	Koji Yanagihara	16UL03229	9684

7590
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09/05/2007

EXAMINER

MEHTA, PARIKHA SOLANKI

ART UNIT	PAPER NUMBER
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3737

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/723,767

Applicant(s)

YANAGIHARA ET AL.

Examiner

Parikha S. Mehta

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/29/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Continued Prosecution Application***

1. The amendment filed on 29 June 2007 under 37 CFR 1.131 has been considered but is ineffective to overcome the King (US Patent No. 5,127,410) reference. Applicant argues that King ('410) fails to provide "a first partial enclosure formed of hard plastics having an opening at the tip, the ultrasonic transceiver unit extending through the opening" as recited in the independent claims of the instant application. Examiner respectfully directs Applicant's attention to col. 2 lines 45-47 of King ('410), wherein the reference states that "[a] second lens subassembly is mounted to the housing to fill the opening therein." Examiner interprets this hole-filling second lens assembly to read upon "the ultrasonic transceiver unit extending through the opening" claimed in the instant application.

Applicant further argues that King ('410) fails to disclose a second partial enclosure which is in contact with the transmission/reception surface of the ultrasonic transceiver unit. Instead, Applicant contends that, because King ('410) discloses a layer of grease between the lens and the second enclosure, the reference teaches away from the second enclosure being in contact with the transmission/reception surface (Remarks, p. 6). As Applicant has neglected to specifically recite the referenced section in which King ('410) discusses the grease, Examiner assumes Applicant is referring to col. 4 lines 9-15 of the reference patent. In response to Applicant's allegation that King ('410) fails to teach the second enclosure being in contact with the transmission/reception surface of the transceiver unit, Examiner maintains that the lens assembly, when combined with the fluid/grease, reasonably constitutes part of a transceiver unit, wherein the layer of grease specifically constitutes the transmission/reception surface as claimed in the instant application.

Accordingly, the rejection of previously presented claims 1-11 in view of King ('410) and secondary references is maintained. Newly added claims 12-20 are also found to be unpatentable over the prior art of record.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 1-3, 8-10, 12-14 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by King (US Patent No. 5,127,410), hereinafter King ('410).

Regarding claims 1, 3, 8-10, 12, 14 and 19, King ('410) discloses an ultrasonic probe comprising a first partial enclosure formed of hard plastics having an opening and a second partial enclosure integrally formed with the first enclosure so as to cover the opening at the tip, wherein the second partial enclosure is formed of a flexible (soft) plastic film in contact with the transmission/reception surface of the ultrasonic transducer, and the ultrasonic transceiver unit extends through the opening (Abstract, col. 2 lines 39-49, col. 4 lines 5-7). The flexible plastic Mylar film of King ('410) constitutes the acoustic lens and thermoplastic polymer claimed in the instant application.

Regarding claims 2 and 13, King ('410) is silent with respect to the process by which the transceiver unit is formed. The claimed phrase "wherein the integrated molding of the first partial enclosure and the second partial enclosure is performed by double molding" is being treated as a product by process limitation. Product by process claims are not limited to the manipulations of the recited steps, only to the structure implied by the step. Thus, even though King ('410) does not expressly discuss the process by which the enclosures are formed, it appears that the product in King ('410) would be the same or similar as that claimed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-7, 11, 15-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over King ('410) in view of Silber (US Patent No. 5,928,154), previously cited by Applicant, hereinafter Silber ('154).

Regarding claims 4-7 and 15-18, King ('410) substantially teaches all features of the present invention as previously discussed for claim 1. King ('410) is silent with respect to specific types of hard plastic which may be used for the first enclosure. In the same field of endeavor, Silber ('154) teaches an ultrasonic probe having a first enclosure made of thermoplastic material, polyethylene, polybutylene, or any other material blend providing properties of both elastomers and plastics (col. 7 lines 51-56, col. 8

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lines 40-46). Silber ('154) teaches these materials for enhancing the ergonomic quality of the probe while allowing the sonographer to maintain sufficient control of the probe (col. 3 lines 16-23, col. 3 line 65-col. 4 line 2). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the first enclosure of King ('410) to be made of any of the materials of Silber ('154), in light of the motivation provided by Silber ('154).

Regarding claims 11 and 20, Silber ('154) further teaches that the housing of the probe may be color-coded to facilitate identification of the type or model of the probe, which also includes different center frequencies as claimed in the instant application (col. 9 lines 12-14). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the probe of King ('410) to also comprise a color-coding indicative of the center frequency of the probe to permit the sonographer to identify the probe type, in view of the teachings of Silber ('154).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parikha S. Mehta whose telephone number is 571.272.3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Parikha S. Mehta

Examiner – Art Unit 3737

BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3737